Five Year Forest and Range Resource Program

1987–1992

Province of British Columbia
Ministry of Forests and Lands

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FIVE YEAR FOREST AND RANGE RESOURCE PROGRAM 1987-1992

Submitted to the Legislative Assembly

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Ministry of Forests and Lands

Honourable John Savage, Acting Minister

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PART 1: INTRODUCTION

This report presents the programs of the Ministry of Forests and Lands, which was formed in August, 1986.

The forest and range resource program is required, under Section 9 of the Ministry of Forests Act, to be laid before the Legislative Assembly. It outlines the government's intentions for the management of British Columbia's forest and range resources for the five year period beginning April 1, 1987 and ending March 31, 1992.

The lands program is not required by statute to be laid before the Legislative Assembly. It is described in this report to show that it complements the forest and range resource program, and to complete the description of the ministry's activities.

The management services program provides the human, financial and physical support services required by the other two programs.

ORGANIZATION OF THE REPORT

Part 2 of this report discusses some important forest and range management issues.

Part 3 describes each of the ministry's three main programs and the role of the private sector in implementing the programs.

Part 4 provides a summary.

PART 2: ISSUES OF IMPORTANCE

This part describes four important issues in forest and range management which will be addressed by the Ministry of Forests and Lands during 1987-1992.

INTEGRATED RESOURCE MANAGEMENT

Forests provide a multitude of resources to the people of British Columbia. Aside from timber, which supports the economy's largest industry and leads to employment for one in four workers, there are:

- o forage, which supports the livestock industry;
- o recreation opportunities, enjoyed by residents and tourists;
- o water, which is vital to all residents, visitors and industries;
- o fisheries, which support the commercial fishing and packing industries, and sport fishing enjoyed by residents and tourists; and,
- o wildlife, which provide big game hunting and viewing, as well as smaller animals vital to an ecologically balanced environment.

Managing these many resources harmoniously is a difficult task, especially in view of the many different preferences of the province's people. Until recently, management of these resources was dispersed among several branches within the ministry. Two reviews during the past year, the internal Mission Review and the Forest Management Review, noted the lack of an integrated approach to resource management as a serious deficiency.

To meet this challenge, the ministry has created the Integrated Resource Management Program. It combines the management of all non-timber resources with a planning function to integrate activities for all non-timber and timber resources.

This program will address concerns of the public through further development of a public involvement process. Resource management issues will be identified and ministry staff will provide leadership in finding resolutions to conflicts.

The program will also provide the Chief Forester with advice and recommendations on the allowable annual cuts (AACs) and management plans for timber supply areas and tree farm licences. Integration of all resources will in this way be assured full consideration in the approval of AACs and plans.

The Report of the Wilderness Advisory Committee, March 1986, identified the need for a more formal approach to wilderness management and conservation. The ministry is responding with a greater emphasis on wilderness area management under the Integrated Resource Management Program. Policies and regulations will be developed and staff will be trained to ensure sound management of wilderness areas throughout the province.

REVIEW OF SILVICULTURE

The ministry is currently reviewing its Silviculture Program, with the goal of ensuring the best use of public funds to meet government responsibilities in reforestation.

Tree planting has expanded tremendously in the past decade, as shown in Table 2-A, below. The combination of increased planting on areas of current denudation and on the backlog of not satisfactorily restocked (NSR) areas will more than triple annual planting from the 60 million trees per year planted on Crown land in 1975 to 1979. Related activities have also increased greatly.

Table 2-A: Planting on Crown Forest Land

Year	Basic Silviculture (Current Denudation)	Intensive Silviculture (Backlog of NSR)	TOTAL
	(millions of seedlings)		
Previous Five Year Programs:[1]:			
1980/81	-	-	74
1981/82	67	11	78
1982/83	86	12	98
1983/84	96	12	108
1984/85	97	19	116
1985/86	94	18	112
1986/87	131	24	155
Current Five Year Program:			
1987/88	155	45	200
1988/89	155	45	200
1989/90	155	45	200
1990/91	155	45[2]	200
1991/92	155	45[2]	200
TOTAL			1,741

[1] Actual planting (Ministry of Forests Annual Reports); goal for 1986/87.
[2] Assumes continuation of FRDA at a similar level of funding.

If the Canada - British Columbia Forest Resource Development Agreement (FRDA) is extended or replaced with a similar level of funding, over 1.7 billion seedlings will be planted on Crown forest land during the twelve year period. This is more than twice the total planted in all years before this period.

The rapid growth of the Silviculture Program makes a comprehensive review desirable now. The review will help to ensure a proper balance among treatments and an appropriate sharing of responsibility by government and the private sector.

ROADS AND BRIDGES

The Ministry of Forests and Lands manages the public's roads and bridges which provide access to the province's forest resources. About 28 000 km of Forest Service roads form a network that is an important provincial asset.

As with any capital investment, regular inspection and maintenance is necessary to protect the investment. The ministry will increase efforts to replace dilapidated bridges over the next five years.

Construction of new roads and bridges will ensure access to new areas for timber harvesting. Environmental problems which could result from harvesting a large part of a watershed in too few years will thus be prevented. A proper balance of forest types to be harvested can also be achieved by expanding the road network. This is important for ensuring continuity in the types and costs of timber available to industry over time.

RESOURCE INVENTORY

Inventories of forest, range and recreation resources combine many detailed maps and complex data describing many facets of the resources. The ministry uses powerful computers to store data and draw precise updated maps quickly. To facilitate the emphasis of integrated resource management, the inventories for range and recreation were recently combined with the forest inventory.

Keeping inventories updated and readily accessible to resource managers in the field is a difficult task, due to constant changes in the resources and the complexity of the data. Inventories must account for the depletion of forests by timber harvesting, wildfire, insects and diseases; and, the growth of natural and managed forests. All these factors can then be balanced to ensure future timber supplies.

Over the next five years, the ministry will survey those areas of the province for which only inventories of old forests exist, so that the extent and condition of young forests in these areas can be assessed. Techniques for updating inventories from satellite images will be applied and developed further. Computerized access to and updating of inventories, currently available in Victoria and the region offices, will be provided in district offices. More growth and yield plots will be installed to provide needed information on timber growth rates.

PART 3: MINISTRY OF FORESTS AND LANDS PROGRAMS

FOREST AND RANGE RESOURCE PROGRAM

This is one of three reports for forest and range resource management required by the Ministry of Forests Act: A resource analysis is published periodically, a resource program is updated annually, and an annual report monitors progress.

The 1984 Forest and Range Resource Analysis assessed the condition of provincial forest and range resources, and reviewed the opportunities for their future use. It is a major source of information and analysis for the government's important task of developing and refining its resource use policies.

The resource program documents the government's forest and range management intentions, selected from alternatives carefully developed by the Ministry of Forests and Lands. The alternatives are based, in part, on opportunities revealed by the resource analysis. The ministry implements the management objectives set out in the resource program and strives to achieve the government's goals at minimum cost.

The annual report records and evaluates the performance of the ministry in implementing each year of the resource program chosen by government.

These three documents comprise a continuing public record of the ministry's forest and range management goals, an assessment of issues and an analysis of management performance. Their purpose is to promote public awareness and understanding of how the forest and range resource assets of British Columbia are being managed and to enable informed comment about the adequacy and intent of the resource program. All three reports can be obtained from the Queen's Printer of British Columbia.

Last year's five year forest and range resource program for 1986-1991 provided a base for this resource program. Adjustments have been made to incorporate the major issues discussed in Part 2 and the reorganization of the ministry.

The seven functions of the ministry which form the forest and range resource program are described below as seven programs.

Harvesting Program

The Harvesting Program makes timber available to the forest industry.

A major goal is to maintain an average provincial timber harvest of 75 million m^3 per year.

In Victoria, the Harvesting Program includes the activities of the Timber Harvesting Branch. At each of the region offices, it includes the activities of valuation, timber and engineering personnel. At the district level, the program includes the activities of personnel for timber, scaling and engineering.

Increases in inspection, maintenance and construction of roads and bridges, as described in Part 2, are planned for the next several years.

Forecast expenditure for 1987/88 is $86 million, including $11 million from the Small Business Enterprise Account.

Small Business Enterprise Program (SBEP)

Sales under the SBEP are made on a competitive basis, with the sale being awarded to the bidder of the largest bonus in addition to appraised stumpage. Roads and reforestation are the responsibility of the ministry.

The goal for the SBEP is to sell the apportioned volume of 4.9 million m^3 per year to qualifying persons and small firms.

Most of the bonus paid by the person or firm awarded a SBEP sale flows into the Small Business Enterprise Account within the government's Consolidated Revenue Fund. The ministry draws money from the account to construct roads for future sales and to reforest and protect past sales areas. In effect, the SBEP operates on a self-financing basis.

Almost two thirds of the forecast expenditure of $21 million in 1987/88 is for road construction, and is incorporated in the forecast expenditure of the Harvesting Program. Approximately one third of the SBEP forecast expenditure is for reforestation, incorporated in the Silviculture Program, and a minor amount is for fire hazard control, incorporated in the Protection Program.

Silviculture Program

The Silviculture Program restocks denuded Crown forest land and improves the value and productivity of the forest resource.

A major goal is to plant 200 million seedlings annually, beginning in 1987/88.

The program includes the activities of the Silviculture Branch in Victoria and the silviculture personnel at the regions and districts. Nurseries and seed orchards located throughout the province are also included.

Including the Canada - British Columbia Forest Resource Development Agreement (FRDA), total expenditures for silviculture in 1987/88 are $249 million. This is the third year of the five year FRDA and marks the beginning of the three years of greatest activity. Most of the funds under FRDA are used in the Silviculture Program, with the remainder assigned to provincial and federal research on silviculture.

For the Silviculture Program, forecast expenditure in 1987/88 is $235 million, up 23% from $191 million in 1986/87. This includes $10 million from the Small Business Enterprise Account, $20 million from the Forest Stand Management Fund and $63 million under FRDA.

The Silviculture Program has four components: basic silviculture, intensive silviculture, nursery operations and seed operations. Each of these components is addressed separately, below.

Basic Silviculture

The basic silviculture component of the Silviculture Program restocks forest areas denuded by current timber harvests, fire and pests. Activities include surveys, site preparation, planting, and brushing.

A major goal is to plant 155 million seedlings annually, beginning in 1987/88, up 18% from the goal of 131 million for 1986/87. Goals for basic silviculture can be expressed in terms of areas treated, as shown in Table 3-A for each activity.

Table 3-A: Basic Silviculture Goals[1]

	1987/88	1988/89	1989/90	1990/91	1991/92
			(hectares)		
Surveys[2]	360 000	360 000	360 000	360 000	360 000
Site Preparation	130 000	130 000	130 000	130 000	130 000
Planting	130 000	130 000	130 000	130 000	130 000
Brushing	25 000	30 000	35 000	35 000	35 000

[1] Rounded to nearest 1 000 ha.

[2] Includes surveys of natural restocking and planting.

The goals in Table 3-A may be revised following the review of silviculture described in Part 2.

Control of brush, known as brushing, will be increased to 35 000 ha per year by 1989/90. In a young forest, brush often competes with desired timber trees for growing space, light and nutrients. This is a major cause of plantation failure and of poor restocking on some areas planned to restock naturally. Brushing can minimize this competition and ensure successful plantations and natural restocking.

Intensive Silviculture

The intensive silviculture component includes activities to restock the backlog of forest land which is not satisfactorily restocked (NSR), and to improve the value and growth of immature forests. Activities include surveys, site rehabilitation, backlog planting, brushing, conifer release, spacing and fertilization.

Intensive silviculture activities, especially backlog planting, will be expanded significantly in 1987/88, with funds under FRDA. A major goal is to plant 45 million seedlings annually, beginning in 1987/88, up 88% from the goal of 24 million for 1986/87. Intensive silviculture goals can be expressed in terms of areas treated, as shown in Table 3-B for each activity.

Table 3-B: Intensive Silviculture Goals[1]

	1987/88	1988/89	1989/90
	-----	(hectares)	----
Surveys	172 000	166 700	166 700
Site Rehabilitation	35 200	35 800	36 100
Backlog Planting	36 200	36 300	36 300
Brushing	5 900	8 700	7 000
Conifer Release	2 000	3 000	2 700
Spacing	19 500	17 600	15 900
Fertilization	15 500	17 800	16 900

[1] Rounded to nearest 100 ha. Includes goals under FRDA.

Table 3-B does not show goals for 1990/91 and 1991/92. Goals for these years will depend on the outcomes of the review of silviculture described in Part 2 and of negotiations for an extension or replacement of FRDA beyond its expiry in 1989/90. The current agreement will restock about one quarter of the backlog of NSR forest land on good and medium sites.

Nursery Operations

The nursery operations component of the Silviculture Program ensures the supply of all the tree seedlings required for basic and intensive silviculture.

Private sector nurseries continue to provide virtually all expansion of nursery capacity. Ministry nurseries, which now provide only half of all seedlings, will continue shifting production from bareroot to container seedlings, due to increased survival and better early growth. By 1989/90, the bareroot seedling production of ministry nurseries will be only 20 million seedlings, for use in special planting situations, compared with the 1980 capacity of 80 million seedlings, for general planting.

Provided that FRDA is extended or replaced with a similar level of funding, one billion seedlings will be produced over the five year period of this resource program.

Seed Operations

The seed operations component provides seed for all nurseries. Seed is collected from both seed orchards and natural stands.

The ministry and the private sector will continue to expand seed orchard facilities to meet the goal of producing sufficient genetically improved seed for 40 million and 80 million seedlings, respectively, for coastal and interior planting.

Research Program

The Research Program provides the ministry with the scientific knowledge and methods needed to achieve its objectives effectively and efficiently.

The program includes the activities of the Research Branch in Victoria and research personnel at the region offices, three research stations and a laboratory. The program addresses three key problem areas: forest renewal, integrated resource management and forest productivity. Activities also include communication and extension services.

Forecast expenditure for 1987/88 is $15 million. This includes $6 million under FRDA for upgrading facilities and expanding activities.

Protection Program

The Protection Program reduces damage to the forest and range resources by wildfire, insects and diseases. Protection of private property and the maintenance of environmental values are also provided.

The overall goals are to keep the area burned by wildfire below 69 000 ha and the timber volume loss below 2.6 million m^3 each year.

The program includes the activities of the Protection Branch in Victoria and protection personnel at the region and district offices.

Bark beetles are destroying vast areas of forest. Efforts to control them, addressed in previous five year programs, will be increased from $8 million in 1986/87 to $10 million in 1987/88.

Forecast expenditure for the Protection Program for 1987/88 is $28 million, including small amounts under the SBEP and FRDA for pest management.

Fire Suppression Program

The Fire Suppression Program provides fire-fighting services for the control of wildfires. The program is linked closely to, and supported by, the Protection Program, but is managed and funded separately.

Program expenditure depends on the severity of the fire seasons. Contracts for air tankers and helicopters, and fire fighter wages are the main expenses.

No major changes in the Fire Suppression Program are planned.

Forecast expenditure for 1987/88 is $60 million. This reflects the policy of including sufficient contingency funding in the budget to match the expected expenditure in most years.

Integrated Resource Management Program

The Integrated Resource Management Program protects, conserves and develops the Crown's non-timber forest resources and integrates activities for these resources with the activities for timber production.

The need for this program is described in Part 2.

The program's goals are to provide 1 million Animal Unit Months (AUMs) of forage to the ranching industry each year; to provide sites and trails for public use; and, to resolve resource use conflicts through careful planning.

The progam includes the activities of the Integrated Resource Branch in Victoria and range, recreation and planning personnel in the region and district offices.

Forecast expenditure for 1987/88 is $11 million.

Inventory Program

The Inventory Program provides forest, range and recreation resource data as a basis for resource management.

The program provides updated maps and georeferenced data to a wide range of users throughout the ministry, outside agencies and the private sector.

The program includes the activities of the Inventory Branch in Victoria and inventory personnel at the region and district levels.

As described in Part 2, goals for this program include upgrading the provincial forest inventory, improving the district staff's access to it and increasing the data available on timber growth and yield. Completion of these tasks is expected to take four or five years.

Forecast expenditure for 1987/88 is $8 million.

LANDS PROGRAM

The Lands Program makes Crown land available under sales, leases and licences for industry, commerce, agriculture, institutions, community services and residential uses. The lands administered include foreshore lands as well as uplands.

The program includes the activities of the Land Policy, Surveyor General, and Land Acquisition and Marketing Branches in Victoria, and lands personnel at the region and district offices.

Forecast expenditure for 1987/88 is $14 million.

MANAGEMENT SERVICES PROGRAM

The Management Services Program provides the ministry's basic infrastructure. This includes the minister's office, all senior managers, and the ministry's administrative, financial, personnel, computing, technical and mechanical services.

At headquarters in Victoria, the program includes senior management and the activities of the Industry Development and Marketing, Audit Services, Public Affairs, Legal Services, Financial Services, Human Resources, Information Systems, and Technical and Administrative Services Branches. At the region and district offices, it includes senior management and the activities of administrative and technical support personnel.

Forecast expenditure for 1987/88 is $74 million.

THE ROLE OF THE PRIVATE SECTOR

Wherever possible, the ministry uses the private sector to implement programs approved by the government. The role of the private sector will continue to increase.

The private sector carries out activities on Crown land under contract to the ministry. It also provides services which ensure an efficient ministry infrastructure.

The performance of private sector contractors is carefully monitored by the ministry.

PART 4: SUMMARY

The ministry's total forecast expenditure for 1987/88 is $531 million.

This consists of $443 million for the Forest and Range Resource Program, $14 million for the Lands Program and $74 million for the Management Services Program.

In the Forest and Range Resource Program, three initiatives described in previous five year programs take effect during this five year program for 1987-1992:

- In each of the next three years, annual expenditures under the Canada - British Columbia Forest Resource Development Agreement (FRDA) will be almost double the level in 1986/87. The main emphasis is on planting the backlog of forest land which is not satisfactorily restocked (NSR).

- Annual planting of recently denuded areas will increase by 18% over the area planted in 1986/87. Combined with an 88% increase in backlog planting, 200 million seedlings will be planted annually, as forecast in previous five year programs.

- Efforts to control bark beetles that are destroying vast areas of forest will be increased.

In addition, four initiatives described in Part 2 of this report will improve the Forest and Range Resource Program:

- Integrated resource management will be given a higher profile, to ensure that non-timber resources are given due emphasis.

- A comprehensive review of the Silviculture Program will ensure the best use of public funds.

- Road and bridge construction and related activities will be increased to ensure adequate access to the province's forest resource.

- Forest inventory work will be increased to ensure a sound basis for future management.